

Scheme Number: TR010041

6.8 Environmental Statement – Appendix 8.5 Draft Written Scheme for Investigation for Post DCO-Consent Trial Trenching

Part B

APFP Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009



#### Infrastructure Planning

#### Planning Act 2008

### The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

#### The A1 in Northumberland: Morpeth to Ellingham

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#### **Environmental Statement - Appendix**

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### **CONTENTS**

1	INTRODUCTION	1
1.1	SCHEME BACKGROUND	1
1.2	DETAILED SCHEME DESCRIPTION	2
1.3	CONSULTATION	4
2	HISTORIC ENVIRONMENT BASELINE SUMMARY	5
2.1	SITE LOCATION	5
2.2	TOPOGRAPHY	5
2.3	GEOLOGY	5
2.4	ARCHAEOLOGICAL POTENTIAL	5
3	AIMS AND OBJECTIVES: STAGE ONE	9
4	METHODOLOGY: STAGE ONE	11
4.1	GENERAL REQUIREMENTS	11
4.2	FIELDWORK METHODOLOGY	12
4.3	HAND EXCAVATION	13
4.4	ARTEFACTS AND ENVIRONMENTAL SAMPLES	15
5	REPORTING: STAGE ONE	18
5.1	GENERAL REQUIREMENTS	18
5.2	REPORT CONTENT	18
5.3	PUBLICATION AND DISSEMINATION	19
6	ARCHIVE	21
6.1	GENERAL REQUIREMENTS	21



7	OPERATIONAL FACTORS	22
7.1	PROJECT TIMETABLE AND MONITORING ARRANGEMENTS	22
7.2	HEALTH AND SAFETY	22
7.3	INSURANCE	23
7.4	POST-EXCAVATION DELIVERABLES	23
7.5	COPYRIGHT	23

#### **APPENDICES**

APPENDIX A

REFERENCES

APPENDIX B

**FIGURES** 

Part B: Alnwick to Ellingham 6.8 Environmental Statement



#### 1 INTRODUCTION

#### 1.1 SCHEME BACKGROUND

- 1.1.1. The Applicant has produced a Written Scheme of Investigation (WSI) for Stage One post-determination archaeological trial trench evaluation (Stage One), in advance of the A1 in Northumberland: Alnwick to Ellingham (Part B) improvements. The WSI has been produced as part of the Development Consent Order (DCO) and is required in accordance with paragraph 5.142 of the National Policy Statement for National Networks (NPS NN) (**Ref. 1**).
- 1.1.2. Part B is located within the county of Northumberland and forms part of Highways England's strategic road network. Part B is located along the A1 between Alnwick (NGR 419839, 614948) and Ellingham (NGR 416926, 623104) and is approximately 8 km in length (Figure 1: Scheme Location, Appendix B of this report). Throughout the length of Part B, the existing A1 would form the new northbound carriageway and a new southbound carriageway would be built to the east of the existing A1.
- 1.1.3. Part B has been subjected to geophysical survey and two areas have been subject to archaeological trial trenching. The preliminary trial trenching took place on land to the east of the A1 at North Charlton (centred at NGR 417033, 622686), adjacent to North Charlton medieval village and open field system Scheduled Monument (National Heritage List Entry (NHLE) 1018348) and on land to the east of West Linkhall (centred at NGR 417442, 621364), immediately to the west of the Camp at West Linkhall Scheduled Monument (NHLE 1006500).
- 1.1.4. The WSI sets out the scope and methodology for the archaeological evaluation, including the fieldwork method, approach to sampling, progress reporting, post-excavation reporting, archiving and dissemination. The aim of the evaluation is to clarify the presence, nature, date, extent and significance of any archaeological remains that might be present in the areas of proposed impact. The WSI will be supplemented by detailed methodology statements produced by the archaeological contractor, which will be produced in consultation with the Applicant, the main contractor and Northumberland County Council (NCC).
- 1.1.5. The WSI has been informed by a Historic Environment Desk-Based Assessment (HEDBA) (Appendix 8.1, of this ES) prepared in support of this Environmental Statement (ES). These set out the legislative and planning background and provide a detailed baseline and an assessment of the likely significant effects of Part B. The WSI has also been informed by: geophysical surveys, carried out between 2018 and 2019 (Appendix 8.2: Geophysical Survey of this ES); archaeological trial trench evaluation in 2019 at West Linkhall (refer to Appendix 8.3: West Linkhall Intrusive Survey Information of this ES); and North Charlton (refer to Appendix 8.4: North Charlton Intrusive Survey Information of this ES); and three walkover surveys undertaken in 2018 and 2019 as reported in the HEDBA (Appendix 8.1 of this ES).

Part B: Alnwick to Ellingham 6.8 Environmental Statement



1.1.6. The results of the evaluation will inform any necessary mitigation strategies to be undertaken either in advance of or during the construction stage (Stage Two). The Stage Two works could comprise mitigation through design where feasible or preservation through record and archive (earthwork survey, full open area excavation, targeted strip, map and record and watching brief). Any archaeological mitigation work that may be necessary would require a separate WSI outlining the scope and method for that work and would need to be approved by NCC.

#### 1.2 DETAILED SCHEME DESCRIPTION

- 1.2.1. A full description of the Scheme is provided in **Chapter 2: The Scheme, Volume 1** of this ES (**Application Document Reference: TR010041/APP/6.1**). The following is a summary of the information which is pertinent to the proposed archaeological evaluation.
- 1.2.2. Part B would upgrade the existing section of the A1 from single carriageway road to dual carriageway standard. This would be achieved by the online widening to the east of the existing A1 along the entire length of Part B between Alnwick and Ellingham. There would also be one new junction (Charlton Mires Junction, an accommodation overbridge (Heckley Fence Accommodation Overbridge), new and extended culverts, temporary and permanent Public Right of Way (PRoW) diversions, and new access roads together with new or improved ancillary features. Two construction compounds would also be established; the Main Compound would be located approximately 1.5 km south west of Felton and shared with Part A: Morpeth to Felton (Part A), whilst the Lionheart Enterprise Park Compound would be located either side of Highways England's Maintenance Depot located within the Enterprise Park to the south of Alnwick. Part B would permanently require a total of 75 hectares of land (which includes land already owned by the Applicant). The majority of land permanently required comprises agricultural land. An additional 45 hectares of land would be temporarily required for the construction of Part B.

#### **Dualling of the Existing Carriageway**

1.2.3. The existing A1 would be used as the northbound carriageway and the new carriageway as the southbound carriageway. The road design standard would be a two-lane dual carriageway to rural standards. The width of each mainline carriageway would be 9.3 m and comprise of two 3.65 m wide lanes with 1 m hardstrips either side. The earthworks within this section of Part B would comprise both cuttings and embankments, with the proposed Charlton Mires Junction raised upon embankments. Six parking lay-bys are proposed along the route of the improved A1, with three of the parking lay-bys being located along the southbound carriageway and three along the northbound carriageway.

#### **Charlton Mires Junction**

1.2.4. One new grade-separated junction, (a junction which is constructed at a different level / height to the roads they connect with), is proposed as part of Part B. The existing at-grade junction, (a junction at the same level or height to the roads they connect), at Charlton Mires and Rock Lodge would be replaced with a compact grade separated junction located at

Part B: Alnwick to Ellingham 6.8 Environmental Statement



Charlton Mires (approximate Grid Reference NU 17713 20573), called Charlton Mires Junction. The new junction would include an overbridge over the A1 which would connect to the side roads and proposed access roads. Two residential properties, Charlton Mires Farm and East Cottage, and the associated outbuildings would need to be acquired and demolished to accommodate Charlton Mires Junction.

#### **Heckley Fence Accommodation Overbridge**

1.2.5. An accommodation overbridge would be provided across the A1 to the east of Heckley Fence (approximate Grid Reference NU 18940 17305), called the Heckley Fence Accommodation Overbridge. Heckley Fence Accommodation Overbridge would accommodate vehicular movements as well as walkers, cyclists and horse-riders (WCH).

#### **Private Means of Access and Other Access Roads**

1.2.6. Private means of access (PMA) would be provided for properties where existing access to the A1 would be stopped up. For all proposed and improved PMA and other access roads, the minimum carriageway width would be 3 m providing appropriately located passing bays, where required. Where agricultural vehicles are anticipated to use the access arrangements, the width would be increased to 4.5 m.

#### **Rock South Farm Access Road**

1.2.7. Currently, residential properties at Rock South Farm, located to the east of Part B, have direct access onto the A1. Direct vehicular access would be closed as part of Part B. Alternative access to Rock South Farm would be provided via a new access road that would run east from Rock Midstead adjacent to the existing woodland before running south towards Rock South Farm, parallel and to the west of an existing agricultural track. The proposed access road would be approximately 1.8 km long, 4.5 m wide and would feature passing bays along its length to allow vehicles to safely pass each other.

#### **West Linkhall Access Road**

1.2.8. Currently, Patterson Cottage and residential properties at West Linkhall have direct access onto the A1. Direct vehicular access would be closed as part of Part B. Alternative access would be provided via an access road that links Charlton Mires Junction with Patterson Cottage and residential properties at West Linkhall. The access road would run parallel to, and to the west of, the existing A1. The new access road would be approximately 0.7 km in length, and it would utilise the existing lay-by off the A1. It would have a 6.0 m wide single lane carriageway for most of its length, with a 4.5 m wide one-lane section in the middle of the road due to a Scheme pinch point.

#### **East Linkhall Access Road**

1.2.9. Currently, properties at East Linkhall, West Lodge, Charlton Hall and Blossom Plantation have direct access onto the A1. Direct vehicular access would be closed as part of Part B. Alternative access would be provided via an access road that links Charlton Mires Junction with properties at East Linkhall, West Lodge, Charlton Hall and Blossom Plantation. The

Part B: Alnwick to Ellingham 6.8 Environmental Statement



access road would run parallel to, and to the east of, the proposed alignment of the A1. The access road would be approximately 1.5 km long, 4.5 m wide and would feature numerous passing bays along its length to allow vehicles to safely pass each other. A wider two-lane section would be provided at the connection with Charlton Mires Junction to allow safe passage of vehicles entering and exiting the junction.

#### **Utilities**

- 1.2.10. Statutory utility services throughout the length of Part B that require diversion include electricity (Northern Powergrid), gas (Northern Gas Networks), water (Northumbrian Water), and telecommunications (BT Openreach, Virgin Media Sky, Vodafone). These are predominantly located underground, other than the overhead electricity lines and some side road telecoms, which would be diverted underground.
- 1.2.11. Utilities would be diverted from the footprint of Part B carriageway to ensure sufficient protection is provided to all utilities and to ensure they are located in a manner to achieve safe access for future maintenance. It is anticipated at this stage, that the depth of the diversions would be between 0.6 m and 1.2 m. The details of these diversions which are within the Order Limits of Part B would be developed further at the detailed design stage.

#### **Culverts and Drainage**

- 1.2.12. Proposed new and extended culverts to be provided as part of Part B.
- 1.2.13. The drainage strategy would incorporate the implementation of filter drains, kerb and gully arrangements, combined kerb drainage and concrete surface water channels as the primary means of removing and collecting surface water runoff from the highway. These arrangements would be located adjacent to the hardstrip at the edges of Part B carriageway. The surface water runoff would be divided into drainage catchments. The drainage system for each catchment would feed an outfall into a watercourse. At each outfall location, a dry detention basin would be provided (six in total).

#### 1.3 CONSULTATION

1.3.1. The Draft WSI was submitted to Northumberland County Archaeologist (NCC) on the 28 January 2020 and comments were received on the 6 February 2020. The WSI was amended in light of the comments and resubmitted to NCC on the 11 February 2020.

Part B: Alnwick to Ellingham 6.8 Environmental Statement



#### 2 HISTORIC ENVIRONMENT BASELINE SUMMARY

#### 2.1 SITE LOCATION

2.1.1. The Part B Main Scheme Area is situated in Northumberland between Alnwick in the south and Ellingham in the north (NGR 419844 614938 to 416925 623090) (Figure 1: Scheme Location, Appendix B of this report). The Main Compound is located approximately 17 km south, to the west of Felton (Main Compound; centred at NGR 417681 599077). A second compound would be located at the Lionheart Enterprise Park, Alnwick, approximately 5 km to the south of the Part B Main Scheme (Lionheart Enterprise Park Compound; centred at NGR 419915 611387). This WSI will focus on the Part B Main Scheme Area only as the compounds have been investigated through previous excavations.

#### 2.2 TOPOGRAPHY

2.2.1. This section of the A1 runs through a gently rolling landscape. The northern section of Part B varies between 102 m Above Ordnance Datum (AOD) and 86 mAOD whilst the southern section varies between 72 mAOD and 51 mAOD.

#### 2.3 GEOLOGY

2.3.1. Information gathered from the British Geological Society (**Ref. 2**) identifies the underlying bedrock and superficial geology of Part Bas a band of the following:

#### **Bedrock**

- **a.** Tyne Limestone Formation and Alston Formation (Sedimentary Limestone, Sandstone, Siltstone and Mudstone)
- Yoredale Group (Sedimentary Limestone, Argillaceous rocks and subordinate Sandstone)
- c. Scremerston Coal Member (Sedimentary Sandstone, Siltstone and Mudstone)
- d. Stainmore Formation (Sedimentary Mudstone, Siltstone and Sandstone)

#### **Superficial**

- a. Till, Devensian Diamicton. Formed under ice age conditions
- b. Glaciofluvial Deposits, Devensian, Sand and Gravel
- c. Alluvium, Quaternary Clay, Silt and Gravel
- d. Peat. Quaternary Period

#### 2.4 ARCHAEOLOGICAL POTENTIAL

#### **INTRODUCTION**

- 2.4.1. The HEDBA (Appendix 8.1 of this ES) identified a total of 108 heritage assets within the adopted study areas for the Part B Main Scheme Area. The heritage assets comprise of 51 designated heritage assets and 57 non-designated heritage assets:
  - a. Eight Scheduled Monuments;

Part B: Alnwick to Ellingham 6.8 Environmental Statement



- b. One Grade I Listed Building;
- c. One Grade II\* Listed Building;
- d. 39 Grade II Listed Buildings;
- e. One Grade I Registered Park and Garden;
- f. One Conservation Area;
- g. 39 Non-Designated Heritage Assets from the HER; and
- h. 18 Non-Designated Heritage Assets identified during the assessment.
- 2.4.2. The **HEDBA** (**Appendix 8.1** of this ES) provides a detailed archaeological and historical background, which is summarised below.

#### **Prehistoric Period**

- 2.4.3. There is no evidence of the Palaeolithic or Mesolithic period within Part B or Study Area. There is evidence of the Neolithic or Early Bronze Age period within the Order Limits of Part B through the inclusion of two flint flakes from the Charlton Mires area (HER 5602). The Bronze Age period saw changes throughout Northumberland with hundreds of burial cairns and cemeteries linked to this period. This is mirrored within the Study Area. To the northwest of East Linkhall lies a Scheduled Monument burial mound (NHLE 1018499). It was excavated in the late 19th century which revealed a cist containing an inhumation and glass bead, further burials are believed to be within the mound. Two further cist burials were recorded in the early 19th century (HER 5033) 350m to the north-west of the Scheduled Monument, within the Order Limits of Part B. Further barrows are recorded near to East Linkhall (HER 5035), near to Charlton Mires (HER 5045), near Ellsnook Plantation (NHLE 1006564), whilst a cropmark ring ditch (HER 4451) approximately 1.2 km south of Rock Midstead may also be the remains of a barrow.
- 2.4.4. Two Iron Age defended settlements lie within 500m of the Order Limits of Part B; Camp Plantation, North Charlton Mill (NHLE 1017955) and Heiferlaw defended settlement, which includes a later Second World War Zero Station (NHLE 1014080). The HER also holds a record for Camp at West Linkhall (HER 5043) that has not been investigated but may be of Iron Age date.

#### **Roman Period**

2.4.5. There is no evidence of Romano-British activity within the Order Limits of Part B or the Study Area.

#### **Early Medieval Period**

2.4.6. Evidence of Early Medieval activity within the study are is limited to the place name 'Rock', which is likely of Anglo-Saxon origin. Alnwick, just to the south of the Study Area, was likely founded during the same period.

#### **Late Medieval Period**

2.4.7. Evidence of Late Medieval activity within the Study Area comprises the sites of six deserted Medieval settlements comprising; North Charlton (NHLE 1018348), Heckley House

Part B: Alnwick to Ellingham 6.8 Environmental Statement



(HER 4430), Charlton Hall (HER 5054), Linkhill (HER 5055), Broxfield (HER 5650) and Denwick (HER 5711) and the Scheduled and Grade I Listed Heiferlaw Tower House (NHLE 1014061 and NHLE 1304282).

#### **Post-Medieval Period**

2.4.8. The landscape through which Part B runs is largely a product Post-Medieval industrial and agricultural activity. Early maps of the period record dispersed homesteads within the Study Area, including Rock Moor House (WSP005), later known as Rock Lough House, Heckley and Fence, with larger settlements at South Charlton and North Charlton. The Post-Medieval period is further evidenced in the Study Area by the Grade II Listed assets; Barn and engine house (NHLE 1041755), Smithy (NHLE 1303729); limekilns (NHLE 1153931 and NHLE 1154647), mills (NHLE 1041885 and HER 25114) and wells (HER 5037, 22425, 22429, 22431, 22433 and 22435).

#### **Industrial Period**

2.4.9. Industrial Period activity within the Study Area is evidenced by a number of properties identified on OS mapping, comprising: Lodge (WSP 001), Charlton Mires Farm (WSP 002), the Site of Drythropple (WSP 003), Rock and Middle Stead (WSP 004), Site of Rock Lough House (WSP 005), Rock South Farm (WSP 006), Rock Lodge (WSP 007), Site of Heckley Grange (WSP 008), Golden Moor (WSP 010), Broom House (WSP 011), Broom House Farm (WSP 012) and Heiferlaw Bank (WSP 013). The 1860s map also depicts The Avenue (WSP 015), a tree lined route way running east-west from Rock.

#### **Modern Period**

2.4.10. Activity of the modern Period in the Study Area is represented by; Seahouses landing ground at Rennington (HER 26255), which was used as the landing ground for 77 Squadron from 1916 to 1918; the Scheduled WW2 Zero Station (NHLE 1014080); three WW2 pillboxes (HER 19936, HER 19874 and HER 447); and two Grade II Listed War Memorials at Denwick (NHLE 1433767) and South Charlton (NHLE 1439802).

#### BELOW GROUND ARCHAEOLOGICAL REMAINS WITHIN PART B

2.4.11. The HEDBA (Appendix 8.1 of this ES) identified three non-designated heritage assets within the Order Limits of Part B. One asset is the findspot of two flint flakes of Neolithic/Early Bronze Age date (HER 5062), another is the site of two Bronze Age cist burials (HER 5033). These assets have been removed from within the Order Limits of Part B, but associated finds and features may still survive. The third non-designated asset within the Order Limits of Part B is an area to the east of Heckley House identified during the walkover survey that contains earthworks (WSP 016). The earthworks are in the form of small, rectilinear platforms, located at the bottom on a steep slope with an adjacent trackway. No corresponding features were identified on the historic mapping and their date remains unknown.

Part B: Alnwick to Ellingham 6.8 Environmental Statement



#### **Geophysical Survey**

2.4.12. The Geophysical Survey (Appendix 8.2 of this ES) identified several areas that contained anomalies that might potentially be of archaeological origin. One of these areas was located within the Order Limits of Part B adjacent to the Scheduled Monument 'Camp at West Linkhall' (NHLE 1006500) and these anomalies were further investigated by trial trenching in 2019.

#### **Targeted Trial Trench Evaluation**

- 2.4.13. Two programmes of targeted pre-determination trial trenching were undertaken. The first programme of targeted trial trenching was focused on the geophysical anomalies adjacent to the Camp at West Linkhall (NHLE 1006500), the second on land within the Order Limits of Part B adjacent to the North Charlton medieval village and open field system Scheduled Monument (NHLE 1018348).
- 2.4.14. Trial trench evaluation of the anomalies adjacent to the Camp at West Linkhall (NHLE 1006500) was undertaken in September 2019 (refer to Appendix 8.3: West Linkhall Intrusive Survey Information of this ES). The evaluation comprised the excavation of twelve 30 m x 1.8 m trenches, in the event, no features or deposits of archaeological significance were observed during the evaluation.
- 2.4.15. The trial trench evaluation of land adjacent to the North Charlton medieval village and open field system (NHLE 1018348) was undertaken in October 2019 (refer to Appendix 8.4:

  North Charlton Intrusive Survey Information of this ES). The works comprised the mechanical excavation of four 30m x 1.8m trial trenches and three hand-dug 1 m x 1 m test pits. The test pits were focused on a north/south aligned earthwork, with smaller east/west aligned earthworks crossing it, and were intended to test whether the features were archaeological in origin. The larger earthwork extends into the Scheduled area. The archaeological excavations indicated the north/south aligned earthwork comprised superficial geological deposits and is likely a glacial moraine. The smaller east/west aligned earthworks were interpreted as Late Post-Medieval to Modern features derived from agricultural practice or perhaps activity associated with the construction of the A1 trunk road.

Part B: Alnwick to Ellingham 6.8 Environmental Statement



#### 3 AIMS AND OBJECTIVES: STAGE ONE

- 3.1.1. The aim of the Stage One works is to clarify the presence, nature, date and extent of any archaeological remains that might be present within the areas of impact. This is for the purposes of informing an appropriate Stage Two mitigation strategy for any significant archaeological remains. If the evaluation reveals little of archaeological significance, then no further work may be required. This would need to be agreed and confirmed in consultation with NCC.
- 3.1.2. The objective of a trial trench evaluation as defined by the Chartered Institute for Archaeologists (CIfA) is to 'determine, as far as is reasonably possible, the nature of the archaeological resource within a specified area using appropriate methods and practices' (Ref. 3). The results of the evaluation will inform an appropriate mitigation strategy for any archaeological remains, if required.
- 3.1.3. This is further explained as 'a limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site. If such archaeological remains are present field evaluation defines their character, extent, quality and preservation, and enables an assessment of their worth in a local, regional, national or international context as appropriate.'
- 3.1.4. In respect of the archaeological research objectives specific to the site, based on the archaeological potential as identified in this ES and the **HEDBA** (**Appendix 8.1** of this ES) these are as follows:
  - a. Identification of any additional evidence for Late Neolithic/Early Bronze Age activity in the Order Limits of Part B, as evidenced by flints recovered from Charlton Mires (HER 5062) and two cist burials near West Linkhall (HER 5033).
  - **b.** Identification of any evidence for Iron Age activity within the Order Limits of Part B, as evidenced in the wider Study Area by two defended settlements (NHLE 1017955 and NHLE 1014080) and potentially a third (HER 5043).
  - c. Identification of any evidence for Late Medieval activity within the Order Limits of Part B as evidenced in the wider Study Area by six deserted Medieval settlements (NHLE 1018348, HER 4430, HER 5054, HER 5055, HER 5650 and HER 5711) and the Scheduled/Grade I Listed Tower House (NHLE 1014061 and NHLE 1304282).
  - **d.** Establish if there is any evidence for Palaeolithic, Mesolithic, Romano-British or Early Medieval activity within Part B.
  - e. Establish if any of the anomalies identified from the geophysical survey are potential archaeological origin, and if so, confirm the date, extent and value.
  - f. Examine the potential for archaeological remains in areas which are blank of geophysical survey anomalies.
  - g. Provide sufficient information in order to develop a programme of archaeological mitigation to be completed either prior to the main stage of construction (i.e. earthwork

Part B: Alnwick to Ellingham 6.8 Environmental Statement



survey, open area excavation, strip map and sample) or during the construction (i.e. archaeological watching brief).

h. Determine if there are any archaeological remains of high, national value that require preservation in-situ. Where present, the results of the trial trenching will be used to help develop a programme of mitigation through design change which will allow the remains to be preserved in-situ. The information provided will also be used to support the production of a Conservation Management Plan for the remains.

Part B: Alnwick to Ellingham 6.8 Environmental Statement



#### 4 METHODOLOGY: STAGE ONE

#### 4.1 GENERAL REQUIREMENTS

- 4.1.1. The archaeological evaluation will be carried out by a suitably qualified archaeological contractor, as defined by the Chartered Institute for Archaeologists' (ClfA) Code of Conduct (Ref. 4) and in the ClfA Standard and Guidance for an Archaeological Field Evaluation (Ref. 2). They would be required to prepare a detailed method statement (see below) which would set out how the evaluation would be undertaken. The archaeological contractor will supply a suitably qualified and experienced team of archaeologists to carry out the investigation. The archaeological contractor will have demonstrable experience of working on similar projects and with comparable archaeological remains.
- 4.1.2. The evaluation would be monitored by the Applicant (or their representative), the main contractor and NCC.
- 4.1.3. All work undertaken will conform to Historic England's Management of Research Projects in the Historic Environment (MoRPHE) (**Ref. 5**), the ClfA Code of Conduct (**Ref. 4**), the ClfA Standard and Guidance for an Archaeological Field Evaluation (**Ref. 2**) and other relevant ClfA Standards and Guidance documents (**Ref. 6**, **Ref. 7** and **Ref. 8**).

#### **DETAILED METHOD STATEMENT**

- 4.1.4. The archaeological contractor will prepare a detailed Method Statement for the archaeological evaluation in response to this WSI. The Method Statement will set out how the trial trenching will be delivered. It will include detail of the archaeological contractor's staff, programme, contingencies and specialists. The contractor's Method Statement should conform to the outline in MoRPHE Project Planning Note 3: Archaeological Excavation (Ref. 5) and would contain information on the following:
  - **a.** The size and qualification of the work force including names and experience of key personnel.
  - **b.** Details of staffing levels and the number of person days to be spent on each specific task.
  - **c.** Details of specialists, including qualifications, who are likely to have input into the Scheme. Whether they are in-house or contracted in.
  - **d.** Details of the recording system for fieldwork and post-excavation analysis.
  - **e.** A timetable covering the whole project from setting up on site through report writing to deposition of the archive, including suitable allowance for bad weather or other unforeseen circumstances, the latter must be clearly indicated.
- 4.1.5. It is recommended that the archaeological contractor undertakes a walkover survey as part of the preparation of the Method Statement in order to review the suitability of the proposed trench locations proposed (**Figure 2: Trench Locations**, **Appendix B** of this report), review any on-site constraints (e.g. overhead cables) and to determine appropriate plant, access points and location of temporary welfare sites.

Part B: Alnwick to Ellingham 6.8 Environmental Statement



4.1.6. The archaeological contractor would be required to request up to date details of any buried utilities within Part B and to review all records of ecological constraints available.

#### **EXCAVATION CONSTRAINTS**

4.1.7. The archaeological contractor will be responsible for locating any drainage pipes, service pipes, cables etc., which may cross the area of excavation, and for taking the necessary measures to avoid disturbing such services. It will be the responsibility of the archaeological contractor to address the requirements of any other constraints, which may include Tree Preservation Orders, PRoWs, contaminated land, areas of ecological interest and the habitats of protected species.

#### **Confirmation of Adherence to Specification**

4.1.8. Prior to the commencement of any work, the archaeological contractor must confirm adherence to this WSI in writing to the Applicant (or their nominated representative) and the Northumberland County Archaeologist (NCC), or state (with reasons) any proposals to vary the WSI. Should the contractor wish to vary the specification, then written confirmation of the agreement with the Applicant (or their nominated representative) and the NCC to any variations is required prior to work commencing. Unauthorised variations are made at the sole risk of the contractor.

#### **Documentary Research**

4.1.9. As part of Part B, a **HEDBA** (**Appendix 8.1** of this ES) of the site was carried out. The **HEDBA** will be made available to the archaeological contractor in order to provide an overview of the archaeological/historical background of the site and its environs. In addition to providing a knowledge base for the work in hand, the results of this assessment may be incorporated into the contractor's report where they are considered to contribute to that report, but any extraneous material should be omitted.

#### 4.2 FIELDWORK METHODOLOGY

- 4.2.1. The trenching plan was developed at a desk top level with reference to the records of the walkover survey, the results of the geophysical survey and satellite imagery. Areas deemed suitable for trenching within the Order Limits of Part B were selected with reference to the same data. Every care has been taken to avoid known services, access points and extant boundaries but it will be the responsibility of the archaeological contractor to assess the accessibility and suitability of each trench location prior to commencement of the fieldwork.
- 4.2.2. The archaeological evaluation will involve the mechanical excavation of 219 trenches (**Figure 2: Trench Locations**, **Appendix B** of this report), measuring between 20 m and 50 m length by 1.8 m in width, providing a 4% sample of Part B. Contingency provision of 1% will be made to allow for the further investigation of any significant features or deposits that are encountered. Based a review of online aerial mapping, the trenches have been positioned to avoid any obvious obstructions, such as areas of woodland and visible

Part B: Alnwick to Ellingham 6.8 Environmental Statement



overhead cables. All the trench locations will need to be reviewed as part of the preparation of the Method Statement and, where necessary, repositioned.

- 4.2.3. The trenching will be undertaken using a suitable mechanical excavator fitted with a toothless 1.8 m (minimum) ditching bucket operating under archaeological supervision. Excavated material will be stored at least 1 m from the edge of the area of excavation. Topsoil and subsoil deposits will be stored separately and scanned for artefacts.
- 4.2.4. Some trenches are targeted on potential archaeological features identified as anomalies in the geophysical survey, whilst others are located in 'blank' areas where no anomalies were identified, to confirm that no remains are indeed present.
- 4.2.5. Excavation will cease at either the surface of the natural geology or at the first archaeological horizon, whichever is first. Any features of potential archaeological origin will be examined through hand excavation. The archaeological contractor will ensure that sufficient time is allowed to thoroughly investigate and record all archaeological deposits encountered.
- 4.2.6. Any trenches containing small features (i.e. postholes and pits) will be extended up to 1.8 m (bucket width) either side of the identified feature to determine if they are discrete, isolated features or associated with other similar or associated features nearby.
- 4.2.7. The trenches will be located and marked out by the archaeological fieldwork contractor surveyor and tied to the National Grid.
- 4.2.8. Based on the predicted depth of deposits, it is assumed that the trenches will be no more than 1.2 m deep. This is sufficiently deep to reach the underlying geology and any archaeological features cut into it. Shoring or stepping the sides is not, therefore, required.
- 4.2.9. In the event that any archaeological deposits or features of high significance or sensitivity are encountered during the works, the excavations must be halted and no further ground disturbance may occur at that location until the Applicant (or their nominated representative) and the NCC have been contacted.

#### 4.3 HAND EXCAVATION

- 4.3.1. All excavations will be recorded according to the normal principles of stratigraphic excavation. The stratigraphy of each trench is to be recorded, from the modern ground surface down to natural deposits, even if no archaeological deposits have been identified.
- 4.3.2. All archaeological deposits, features and finds will be recorded according to accepted professional standards (refer to references section) and in line with the archaeological contractor's established recording systems. The recording system employed will be approved by the NCC prior to the works commencing.
- 4.3.3. Hand excavation of identified remains will consist of a minimum of:
  - **a.** Linear boundary features not associated with settlement will be sufficiently sampled to allow for informed interpretation of their date and function. Each section should be at

Part B: Alnwick to Ellingham 6.8 Environmental Statement



least 1 m wide and, where possible, sections will be located and recorded adjacent to the trench edge. All intersections will be investigated to determine the relationship(s) between the component features. All termini will be investigated.

- **b.** Other linear and discrete features: all stake-holes, post-holes, pits, ring ditches, kilns, and other structural/funerary/industrial features will be 50% excavated and recorded in section. All intersections will be investigated to determine the relationship(s) between the component features. Where possible, sections will be located and recorded adjacent to the trench edge.
- **c.** Built structures: walls, floors etc. will be excavated sufficient to establish their form, phasing and construction techniques. All intersections will be investigated to determine the relationship(s) between the component features.
- **d.** Excavation must not compromise the integrity of the archaeological record. Investigation should be undertaken in such a way as to allow for the protection of the deposits through the application of mitigation procedures or through the opportunity for better excavation under the conditions pertaining to full investigation of a larger area. Care will be taken to note the stratigraphic position of any dateable artefacts recovered.
- 4.3.4. Section drawings (at a minimum scale of 1:20) must include heights AOD. Plans (at a minimum scale of 1:50) must include AOD spot heights for all principal strata and any features. All site drawings will be completed on plastic drafting film.
- 4.3.5. The actual areas of excavation and all archaeological (and possibly archaeological) features should be accurately located on a trench plan and recorded by photographs, scale drawings and written descriptions sufficient to permit the preparation of a detailed archive and report on the material. The trench location, as excavated, will be accurately surveyed using industry standard GPS equipment with sub one-centimetre accuracy, tied into the O.S. National Grid and located on an up to date 1:1250 O.S. map base.
- 4.3.6. A site diary, comprising a description and discussion of the archaeology, is to be maintained on a daily basis.
- 4.3.7. A 'Harris Matrix' stratification diagram will be used to record all stratigraphic relationships on the site. Spot dating should be incorporated where applicable.
- 4.3.8. The trial trenches will not be backfilled before they have been inspected by the NCC or the agreement of that Officer has otherwise been obtained for the backfilling of specific trenches.

#### **Photography**

4.3.9. A full and detailed photographic record of individual contexts will be maintained and similarly general views from standard viewpoints of the overall site at all stages of the excavation will be generated. Photography will be undertaken using high-resolution digital cameras (no less than 10 megapixels). Photograph records will be maintained on indexed pro-forma sheets.

Part B: Alnwick to Ellingham 6.8 Environmental Statement



4.3.10. Images may be captured in RAW format, but archiving should follow the guidance given by Historic England (Ref. 9) in Digital Image Capture and File Storage: Guidelines for Best Practice. Digital images will be archived in both a JPEG and TIFF formats. The latter as uncompressed 8-bits per channel TIFF version 6 file of not less than 25 Mbs (refer to section 2.3 of the Historic England guidance). The contractor must include metadata embedded in the TIFF file. The metadata must include the following: the commonly used name for the site being photographed, the relevant centred OS grid coordinates for the site to at least six figures, the relevant township name, the date of the photograph, the subject of the photograph, the direction of shot and the name of the organisation taking the photograph.

#### 4.4 ARTEFACTS AND ENVIRONMENTAL SAMPLES

#### **Artefacts**

- 4.4.1. All recovery, retention and treatment of finds and samples will be carried out mindful of the overall purpose of the exercise, i.e. to evaluate for further decision making, as expressed in ClfA (**Ref. 3**) para 3.2.12. and 3.3.8. To this end, all artefactual and ecofactual material will be reviewed on site for its capability to inform the evaluation report.
- 4.4.2. Identified archaeological finds and artefacts will be carefully recovered by hand and bagged or boxed according to the type of artefact (i.e. pottery, ceramic building material/CBM, bone, worked flint, metal) archaeological context from which they came, with a label indicating the site code, find type and context reference number). Particularly notable artefacts will be recorded as a 'registered' find and recorded three dimensionally with Ordnance Datum levels. This will include in situ prehistoric worked flint.
- 4.4.3. Initial conservation and storage will be in a proper manner and to standards set out follow First Aid for Finds (**Ref. 10**) and the ClfA 'Standard and Guidance for the collection, documentation, conservation and research of archaeological materials' (**Ref. 6**). If necessary, an appropriately qualified and experienced archaeological conservator will be appointed to advise and assist in the lifting of fragile finds of significance and or value and to arrange for the X-raying and investigative conservation of objects as may be necessary.
- 4.4.4. Certain classes of bulk material, i.e. Post-Medieval pottery and building material may be discarded if there is a considerable quantity (more than a single standard archive box of c. 0.016 m²), after recording with a representative sample.
- 4.4.5. Post-Medieval remains associated with industrial activity will not be subject to discard and post-excavation analysis is required on the full sample.
- 4.4.6. All pottery, bone and worked flint will be washed and then marked in accordance with the project archive repository guidelines. Most building material and burnt flint (not including significant diagnostic material) will be identified, counted, weighed and discarded. Samples will be retained as appropriate. The finds identification and specialist work will be undertaken by the relevant find's specialists agreed with the NCC to assess the date range of the assemblage. With particular reference to pottery use relevant county or region-

Part B: Alnwick to Ellingham 6.8 Environmental Statement



specific type series for identification and dating, where available. This evidence will be used to characterise the site, and to establish the potential for all categories of finds' should further archaeological work be necessary. Records of artefact assemblages will clearly state how they were recovered, sub-sampled and processed. Consideration will be given for donation of appropriate artefacts to type series reference collections.

#### **Treasure**

4.4.7. Any artefacts that fall under the statutory definition of Treasure (as defined by the Treasure Act of 1996 (**Ref. 11**) and its revision of 2002 (**Ref. 12**)) will be reported immediately to the Applicant (or their representative), the main contractor, the NCC, the relevant Coroner's Office, the Finds Liaison Officer and the landowner. A Treasure receipt must be completed, and a report submitted to the Coroner's Office and the FLO within 14 days of understanding the find is Treasure. Failure to report within 14 days is a criminal offence.

#### **Human Remains**

4.4.8. If human remains are encountered the Applicant (or their nominated representative), the NCC and the local Coroner will be informed immediately. Human remains should be left in situ and only removed if absolutely necessary. Where excavation of human remains is unavoidable, it will be undertaken following the provisions of the Coroners Unit in the Ministry of Justice and relative professional guidelines. It is essential that the post-excavation assessment of excavated human remains contains an analysis of the material and a statement for the final deposition of the assemblage. The qualified statement must address future research potential, where applicable, and the options for reburial.

#### **Environmental Samples**

- 4.4.9. If archaeological deposits, which may have environmental potential are identified, a programme of environmental sampling will be initiated. A range of samples will be undertaken from dated and undated deposits and features. The sampling strategy will follow the Historic England (then English Heritage) environmental sampling guidelines outlined in Environmental Archaeology, A guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-Excavation (Ref. 13).
- 4.4.10. Secure and phased deposits, especially those related to settlement activity and/or structures will be considered for sampling for the recovery of charred plant remains, charcoal and mineralised remains. Any cremation-related deposits will be sampled appropriately for the recovery of cremated human bone and charred remains. If any evidence of in situ metalworking is found, suitable samples for the recovery of slag and hammer scale will be taken.
- 4.4.11. Where sealed waterlogged deposits are encountered, samples for the recovery of waterlogged remains, insects, molluscs and pollen, as well as any charred remains, will be considered. The taking of sequences of samples for the recovery of molluscs and/or waterlogged remains will be considered through any suitable deposits such as deep enclosure ditches, barrow ditches, palaeo-channels, or buried soils. Monolith samples will

Part B: Alnwick to Ellingham 6.8 Environmental Statement



also be taken from this kind of deposit as appropriate to allow soil and sediment description/interpretation as well as sub-sampling for pollen and other micro/macrofossils such as diatoms, foraminifera and ostracods.

- 4.4.12. For remains suspected to be of Neolithic to Romano-British, the use of multiple radiocarbon dates should be applied and where possible samples should be taken from contexts with stratigraphic relationships to allow the use of Bayesian calibration of dates, in accordance with the North Eastern Regional Research Framework (**Ref. 14**).
- 4.4.13. The need for any more specialist samples, such as optically stimulated luminescence (OSL), archaeomagnetic dating and dendrochronology will be evaluated and will be taken under the direction of the relevant specialist.
- 4.4.14. The strategy for environmental sampling must be outlined in the archaeological contractor's Method Statement and will be subject to variation as appropriate during the evaluation. Variations to the strategy will be made following consultation with the NCC, the Applicant (or their nominated representative) and the Historic England Assistant Science Advisor and/or the project's palaeoenvironment specialist.

#### **Metal Detecting**

- 4.4.15. Spoil heaps are to be scanned for ferrous and non-ferrous metal artefacts using a metal detector capable of making this discrimination, operated by an experienced metal detector user (if necessary, operating under the supervision of the contracting archaeologist). Modern artefacts are to be noted but not retained (19th-century material and earlier should be retained). Artefacts recovered by metal detecting should be clearly identified in the final report.
- 4.4.16. If a non-professional archaeologist is to be used to carry out the metal-detecting, a formal agreement of their position as a sub-contractor working under direction must be agreed in advance of their use on site. This formal agreement will apply whether they are paid or not.

Part B: Alnwick to Ellingham 6.8 Environmental Statement



#### 5 REPORTING: STAGE ONE

#### 5.1 GENERAL REQUIREMENTS

- 5.1.1. A report on the fieldwork and archive will be completed and made available within six weeks of the completion of fieldwork. The report will describe the methods employed and its conclusions will include a clear statement of the archaeological value of the results, and their significance. The report will conform to the standards set out in the CIfA Standard and Guidance for Archaeological Field Evaluation (Ref. 3) and must contain sufficient detail to enable the results to be interpreted without recourse to the site archive. It will include tabulations of contexts and finds by context. It will also include a non-technical summary of the project and its results.
- 5.1.2. The findings of the fieldwork will be related to the relevant known archaeological and historical information held by the Northumberland HER.
- 5.1.3. Reporting on ceramic artefacts and pottery should follow the guidance given in 'A Standard for Pottery Studies in Archaeology' (**Ref. 15**) and endorsed by the Prehistoric Ceramics Research Group; the Study Group for Roman Pottery and the Medieval Pottery Research Group.
- 5.1.4. In the first instance, the archaeological contractor will submit a digital copy of the draft report in .docx format to the Applicant (or their nominated representative) for review and comment.
- 5.1.5. Following any amendment required by the Applicant (or their nominated representative), the draft report will be submitted by the archaeological contractor to the NCC for approval. The report will be submitted in a timely manner to allow further work, if necessary, to be scheduled. If specialist reports are outstanding, then a catalogue of finds with spot dates may be submitted with the report.
- 5.1.6. A fully indexed field archive shall be compiled consisting of all primary written documents, plans, sections, photographic negatives and a complete set of labelled photographic prints.
- 5.1.7. The full report, once accepted by the NCC, will be supplied on the understanding that it will be added to the Northumberland HER and will become a public document after an appropriate period of time (generally six months).

#### 5.2 REPORT CONTENT

- 5.2.1. The report will include, as a minimum:
  - a. A summary sheet providing the following information:
    - i. Site name and grid reference
    - ii. Site activity (i.e. type of investigation)
  - iii. Date and duration of project
  - iv. Contractor's Site Code
  - v. Area of site

Part B: Alnwick to Ellingham 6.8 Environmental Statement



- vi. Summary of results
- vii. Monuments identified
- viii. Location and reference of archive
- **b.** And the following main sections, as appropriate to results:
  - i. Summary
- ii. Site location
- iii. Archaeological and historical background
- iv. Methodology
- v. Description of results (including stratigraphic description, if necessary)
- vi. Interpretation of the results in the appropriate context
- vii. Summary of the archaeological potential of the Scheme and its immediate surrounding area
- viii. Consideration of the significance of the findings on a local, regional and national basis
- ix. Critical review of the effectiveness of the methodology
- x. References
- xi. Appropriate photographs in colour
- xii. Location plan (no smaller than 1:10 000)
- xiii. Site layout plans on an OS base, with north point and scale with the location of trial pits/trenches
- xiv. Plans and sections of significant archaeological remains, as necessary, including Cardinal Points, Ordnance Datum, vertical and horizontal scales
- xv. Site matrices where appropriate
- xvi. Specialist descriptions of artefacts and ecofacts as required
- xvii. Summary of the contents of the project archive and its location (including summary catalogues of finds)
- xviii. Photographic Register
- xix. Copy of the OASIS record form

#### 5.3 PUBLICATION AND DISSEMINATION

- 5.3.1. In order to fulfil the terms of the planning condition, the results of the investigation will need to be published and disseminated at a level that is appropriate to the significance of the remains recorded.
- 5.3.2. Copies of the report should be deposited with the Northumberland Historic Environment Record (HER), on the understanding that it will be made available as a public document after an appropriate period (not exceeding 6 months from the completion of fieldwork); a further hard copy to be sent to the client. Electronic (PDF) copies of the report will also be provided alongside the hard copies.
- 5.3.3. A summary account of the work should be submitted to the editor of the local archaeological journal and any relevant period journals (e.g. Medieval Archaeology, Proceedings of the Prehistoric Society, Archaeologia Aeliana) no later than 31 March of the year following completion of fieldwork.

Part B: Alnwick to Ellingham 6.8 Environmental Statement



5.3.4. Further publication may range from a 'grey literature' archaeological report, to a short journal article in local and period-based archaeological journals as appropriate (as above), to a full monograph (in the event that the evaluation resulted in further excavation). The level of dissemination would be determined in consultation with the NCC.

5.3.5. In all cases, a short summary of the results of the work will be submitted to the HER, and National Record for the Historic Environment (NHRE), as maintained by Historic England, via a standard OASIS archaeological report form. The archaeological contractor must, therefore, complete the online OASIS form at <a href="http://ads.ahds.ac.uk/project/oasis/">http://ads.ahds.ac.uk/project/oasis/</a>.

Part B: Alnwick to Ellingham 6.8 Environmental Statement



#### 6 ARCHIVE

#### 6.1 GENERAL REQUIREMENTS

- 6.1.1. All recovered artefacts are the property of the Landowner. The Applicant (or their nominated representative) will provide the relevant contact details of the Landowner(s) to the archaeological contractor in order to commence the transfer title of artefacts so that the archive, including all artefacts, can be deposited with the Great North Museum.
- 6.1.2. The site archive will be assembled in accordance with Archaeological Archives: A Guide to Best Practice in Creation, Compilation, Transfer and Curation (**Ref. 16**). It will also adhere to the recommendations in MoRPHE (**Ref. 5**), Guidelines for the Preparation of Excavation Archives for Long-term Storage (**Ref. 17**), Standards in the Museum Care of Archaeological Collections (**Ref. 18**), Society of Museum Archaeologists' guidance (**Ref. 19**) and relevant ClfA standards and guidance (**Ref. 7**).
- 6.1.3. The site archive will contain all the data collected during the fieldwork, including records and finds, and the evaluation report including all specialist reports. The archaeological contractor will ensure that the archive is quantified, ordered, indexed and internally consistent, and adequate resources will be provided to ensure that all records are checked. Archive consolidation will be undertaken immediately following the conclusion of fieldwork.
- 6.1.4. The archaeological contractor will ensure that the project is recorded on the OASIS database. All parts of the OASIS online form <a href="http://ads.ahds.ac.uk/project/oasis/">http://ads.ahds.ac.uk/project/oasis/</a> will be completed and a copy will be included in the final report and also with the site archive. A digital copy of the approved report will be uploaded to the OASIS website.

#### **Archive Deposition**

6.1.5. An integrated project archive (including both artefacts/ecofacts and project documentation) should be prepared upon completion of the project for deposition with the Great North Museum. The digital archive will be deposited with the Archaeology Data Service. Provision should be made for the payment of a 'deposit grant' at the time of archive transfer towards the costs of archive curation in perpetuity. The rates and requirements currently employed by the nominated depositing museum for its archive store should be used for guidance.

Part B: Alnwick to Ellingham 6.8 Environmental Statement



#### 7 OPERATIONAL FACTORS

#### 7.1 PROJECT TIMETABLE AND MONITORING ARRANGEMENTS

- 7.1.1. The Applicant (or their nominated representative) will liaise with the archaeological contractor regarding access and the health and safety requirements in force on the site. Information will be provided to the NCC as relevant. A programme of works monitoring, recording and access will be agreed by the archaeological contractor, the Applicant (or their nominated representative) and the NCC before the project commences.
- 7.1.2. The Applicant (or their nominated representative) will be kept informed of progress by the archaeological contractor to allow for any monitoring visits by the NCC to be conducted during the course of the fieldwork.

#### Monitoring

- 7.1.3. The Applicant (or their nominated representative) will monitor and assure all elements of the archaeological fieldwork and will ensure that the work is carried out in accordance with this WSI, professional standards and the requirements of the NCC. Any variance in the scope of work shall be made by the Applicant (or their nominated representative), in consultation with the NCC.
- 7.1.4. Any key decisions (such as excavation strategy or work scope changes) that are made on site shall be noted during the monitoring visits and communicated by the Applicant (or their nominated representative) to relevant parties. Visits by the NCC will be arranged so that they are satisfied that the works are being conducted to proper professional standards. Access is also to be afforded at any reasonable time to Historic England's Archaeological Science Advisor.

#### 7.2 HEALTH AND SAFETY

- 7.2.1. All relevant health and safety regulations and codes of practice will be respected. The Applicant (or their nominated representative) will provide the archaeological contractor with all known site constraints, such as areas of contamination, utilities and access limitations. The archaeological contractor will provide a Health and Safety Statement prior to the commencement of the archaeological investigation. All site procedures will be carried out in accordance with the guidance set out in the Health and Safety Manual compiled by the Federation of Archaeological Employers and Managers (FAME) (Ref. 20) and in accordance with current legislation which includes:
  - a. The Health and Safety at Work Act 1974 (Ref. 21)
  - b. Management of Health and Safety at Work Regulations 1999 (Ref. 22)
  - c. The Construction (Design and Management) Regulations 2015 (Ref. 23)
  - d. The Control of Asbestos Regulations 2006 (Ref. 24)
  - e. Construction (Health, Safety and Welfare) Regulations 1996 (Ref. 25)
  - f. The Health and Safety (Miscellaneous Amendments) Regulations 2002 (Ref. 26)

Part B: Alnwick to Ellingham 6.8 Environmental Statement



- g. The Control of Substances Hazardous to Health Regulations 2002 (Ref. 27)
- h. The Health and Safety (First Aid) Regulations 1981 (Ref. 28)
- i. The Regulatory Reform (Fire Safety) Order 2005 (Ref. 29)
- j. The Provision and Use of Work Equipment Regulations 1998 (Ref. 30)
- k. Lifting Operations and Lifting Equipment Regulations 1998 (Ref. 31)
- 7.2.2. Prior to the start of the archaeological investigation, risk and method statements will be produced and submitted to the Client and/or main contractor. All staff involved or associated with the investigation will be provided with copies of the documents prior to the beginning of the works and they will be required to read them before commencing construction works.
- 7.2.3. The archaeological contractor will be responsible for the safeguarding of its staff, as far as reasonably practicable, and others who may be affected by the works on site.
- 7.2.4. The Applicant (or their nominated representative) must be notified immediately of the nature and extent of any unexpected site hazards and the appropriate health and safety precautions required.
- 7.2.5. Personal Protective Equipment (PPE) will be worn by all staff as appropriate.

#### 7.3 INSURANCE

7.3.1. Full details of the insurance and copies of certificates covering the archaeological contractor shall be supplied upon request.

#### 7.4 POST-EXCAVATION DELIVERABLES

- 7.4.1. The Applicant (or their nominated representative) will technically assure that the deliverables conform to the format and scope agreed with the NCC, and that the reporting is accurate and clear and with sound conclusions, and that it has been produced to professional standards and the requirements of the NCC. This will be the case whether the agreed deliverables take the form of an archaeological report for the HER, journal article or monograph.
- 7.4.2. The Applicant (or their nominated representative) will liaise with the archaeological contractor to ensure that the work is carried out to an agreed delivery programme.

#### 7.5 COPYRIGHT

7.5.1. Copyright will remain with the archaeological contractor under the *Copyright, Designs and Patents Act 1988* (**Ref. 32**) with all rights reserved. An exclusive licence will be provided to the client, or their appointed representative, for use of all project records and reports in all matters directly relating to the project. The archaeological contractor retains the right to be identified as the author of all project documentation and reports.

## Appendix A

REFERENCES

Part B: Alnwick to Ellingham 6.8 Environmental Statement



#### PUBLISHED AND DOCUMENTARY SOURCES

- **Ref. 1** Department for Transport\_(2014)\_National Policy Statement For National Networks (NPS NN).\_Available at: <a href="https://www.gov.uk/government/publications/national-policy-statement-for-national-networks">https://www.gov.uk/government/publications/national-policy-statement-for-national-networks</a>
- **Ref. 2** British Geological Survey (2020). Available at: , <a href="http://mapapps.bgs.ac.uk/geologyofbritain/home.html">http://mapapps.bgs.ac.uk/geologyofbritain/home.html</a> Accessed on: 4 March 2019
- **Ref. 3** Chartered Institute for Archaeologists (2014) *Standard and Guidance for an Archaeological Evaluation*
- **Ref. 4** Chartered Institute for Archaeologists (2014) Code of Conduct, Reading.
- **Ref. 5** Historic England (2015) *Management of Research Projects in the Historic Environment (MoRPHE).*
- **Ref. 6** Chartered Institute for Archaeologists (2014) *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives*
- **Ref. 7** Chartered Institute for Archaeologists (2014) *Standard and guidance for the collection, documentation, conservation and research of archaeological materials*
- **Ref. 8** Chartered Institute for Archaeologists (2014) *Standards and guidance for commissioning work or providing consultancy advice on archaeology and the historic environment*
- **Ref. 9** Historic England (2015) *Digital Image Capture and File Storage: Guidelines for Best Practice*
- **Ref. 10** Leigh D, Watkinson and Neal V 1998, *First Aid for Finds: Practical Guide for Archaeologists*
- Ref. 11 Treasure Act 1996 Code of Practice (2nd Revision) 1996, DCMS
- Ref. 12 Treasure (Designation) Order 2002, TSO
- **Ref. 13** English Heritage, 2011, *Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation*
- **Ref. 14** Petts, D, and Gerrard, C. 2006. *Shared Visions: The North-East Regional Research Framework for the Historic Environment*, Durham County Council
- **Ref. 15** Barclay, A., Knight, D., Booth, P., Evans, J., Brown, D. H., and Wood, I, 2016 *A Standard for Pottery Studies in Archaeology,* Medieval Pottery Research Group
- **Ref. 16** Archaeological Archive Forum, 2011, *Archaeological Archives: a guide to best practice in creation, compilation transfer and curation*
- **Ref. 17** United Kingdom Institute for Conservation, 1990, *Guidance for Archaeological Conservation Practice*

Appendix 8.5 June 2020

Part B: Alnwick to Ellingham 6.8 Environmental Statement



**Ref. 18** – Museums and Galleries Commission, 1992, *Standards in the Museum Care of Archaeological Collections*.

**Ref. 19** – Society of Museum Archaeologists, 1995, *Towards an Accessible Archive. The Transfer of Archaeological Archives to Museums: Guidelines for Use in England, Northern Ireland, Scotland and Wales.* 

**Ref. 20** – the Federation of Archaeological Employers and Managers (FAME) (2019) Available at: https://famearchaeology.co.uk/ Accessed on: 4 March 2019

**Ref. 21** – The Health and Safety at Work Act (1974) Available at: <a href="http://www.legislation.gov.uk/ukpga/1974/37">http://www.legislation.gov.uk/ukpga/1974/37</a>

**Ref. 22** – Management of Health and Safety at Work Regulations (1999) Available at: <a href="http://www.legislation.gov.uk/uksi/1999/3242/contents/made">http://www.legislation.gov.uk/uksi/1999/3242/contents/made</a>

**Ref. 23** – The Construction (Design and Management) Regulations (2015) Available at: http://www.legislation.gov.uk/uksi/2015/51/contents

**Ref. 24** – The Control of Asbestos Regulations (2006) Available at: http://www.legislation.gov.uk/uksi/2006/2739/contents/made

**Ref. 25** – Construction (Health, Safety and Welfare) Regulations (1996) Available at: <a href="http://www.legislation.gov.uk/uksi/1996/1592/contents/made">http://www.legislation.gov.uk/uksi/1996/1592/contents/made</a>

**Ref. 26** – The Health and Safety (Miscellaneous Amendments) Regulations (2002) Available at: <a href="http://www.legislation.gov.uk/uksi/2002/2174/contents/made">http://www.legislation.gov.uk/uksi/2002/2174/contents/made</a>

**Ref. 27** – The Control of Substances Hazardous to Health Regulations (2002) Available at: <a href="http://www.legislation.gov.uk/uksi/2002/2677/contents">http://www.legislation.gov.uk/uksi/2002/2677/contents</a>

**Ref. 28** – The Health and Safety (First Aid) Regulations (1981) Available at: <a href="http://www.legislation.gov.uk/uksi/1981/917/contents/made">http://www.legislation.gov.uk/uksi/1981/917/contents/made</a>

**Ref. 29** – The Regulatory Reform (Fire Safety) Order (2005) Available at: http://www.legislation.gov.uk/uksi/2005/1541/contents

**Ref. 30** – The Provision and Use of Work Equipment Regulations (1998) Available at: <a href="http://www.legislation.gov.uk/uksi/1998/2306/contents/made">http://www.legislation.gov.uk/uksi/1998/2306/contents/made</a>

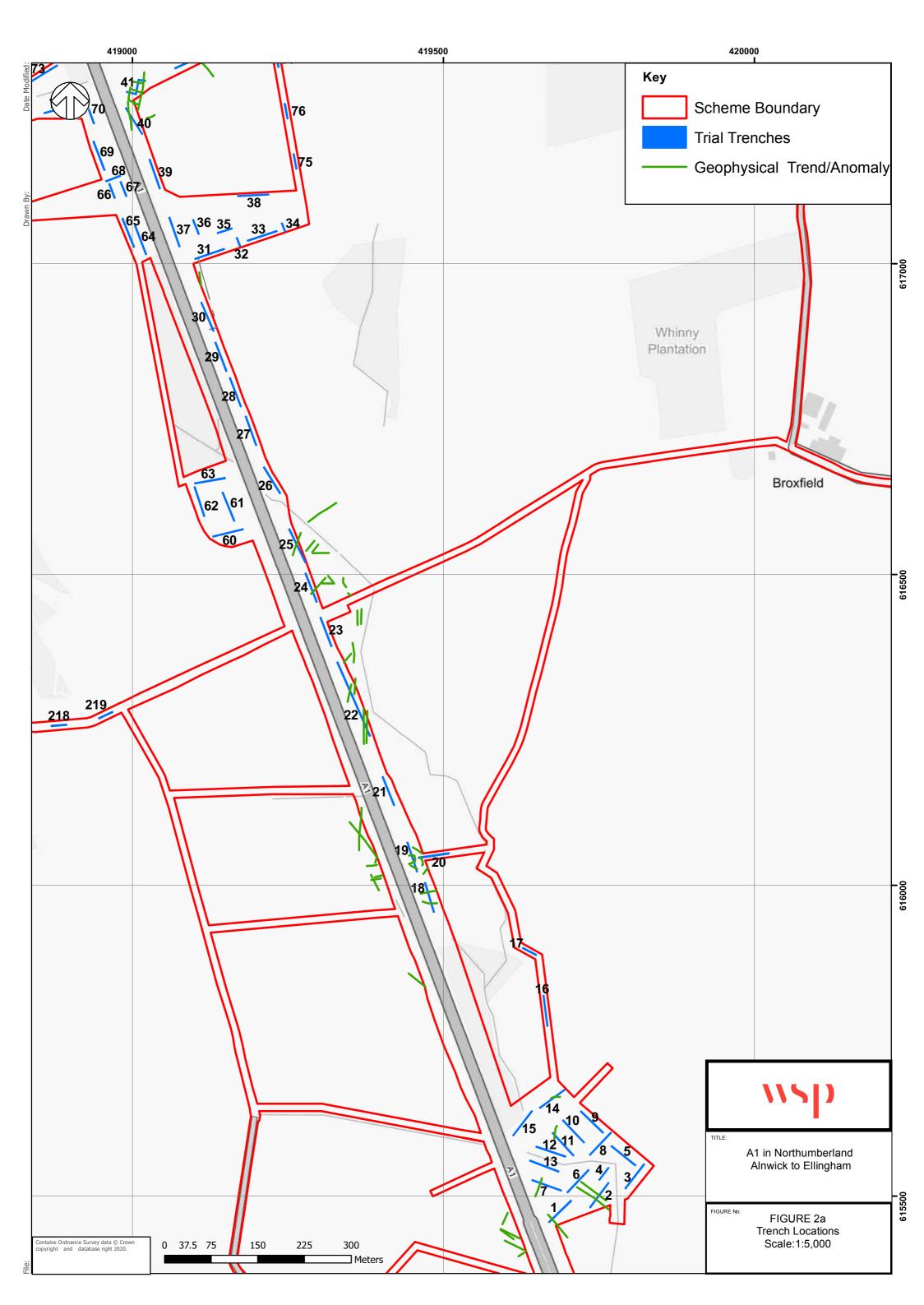
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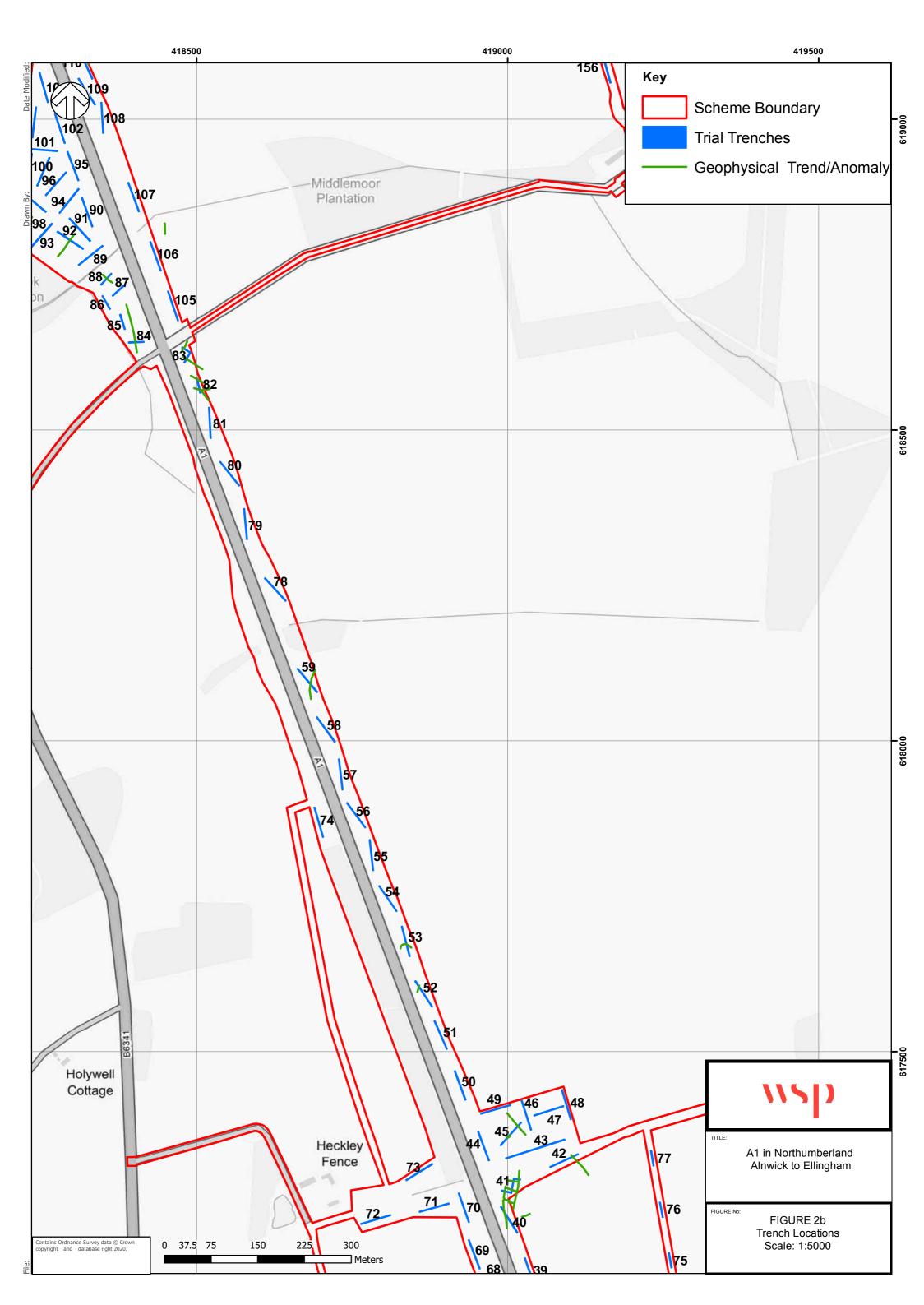
**Ref. 32** – Copyright, Designs and Patents Act (1988) Available at: <a href="http://www.legislation.gov.uk/ukpga/1988/48/contents">http://www.legislation.gov.uk/ukpga/1988/48/contents</a>

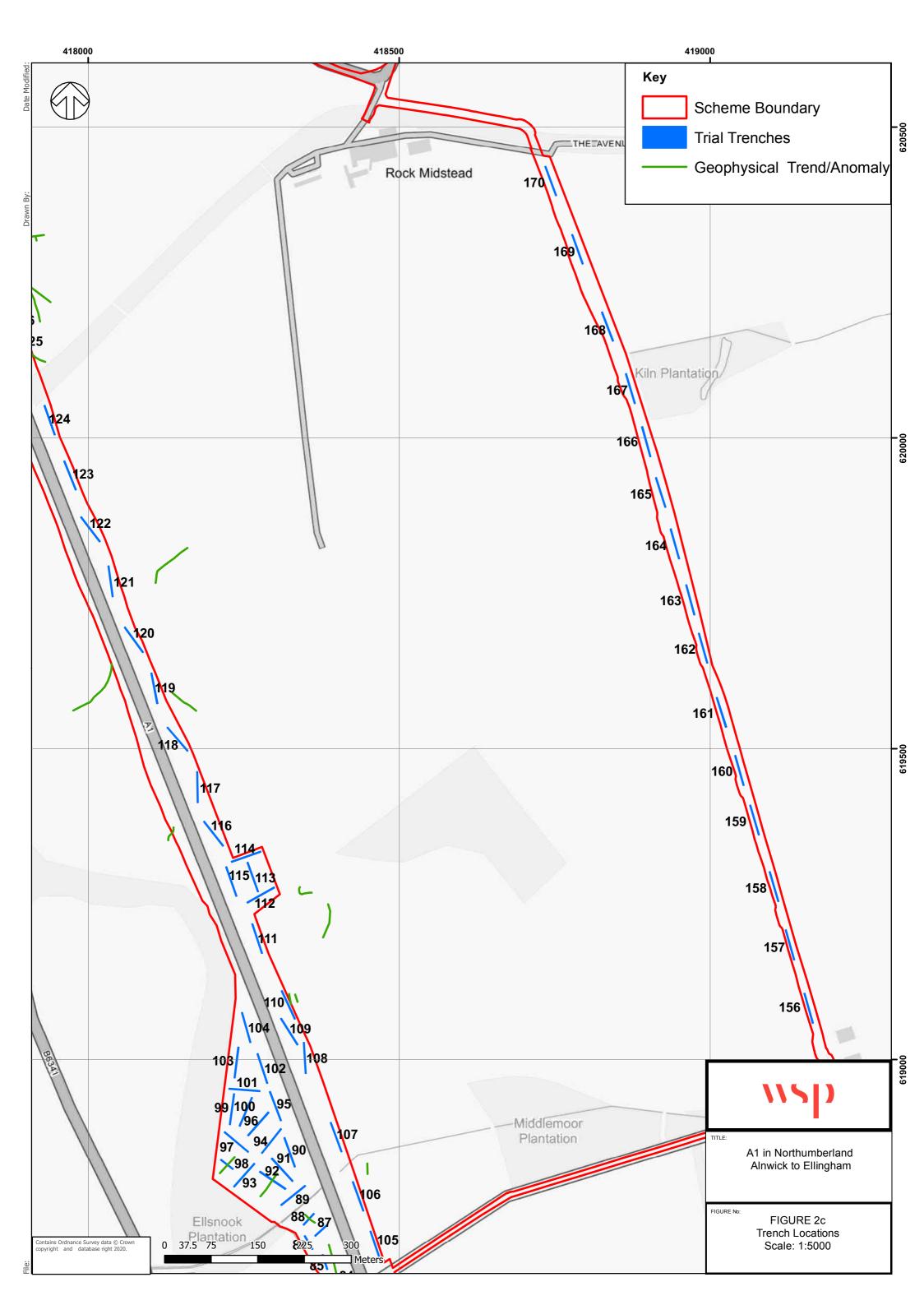
Appendix 8.5 June 2020

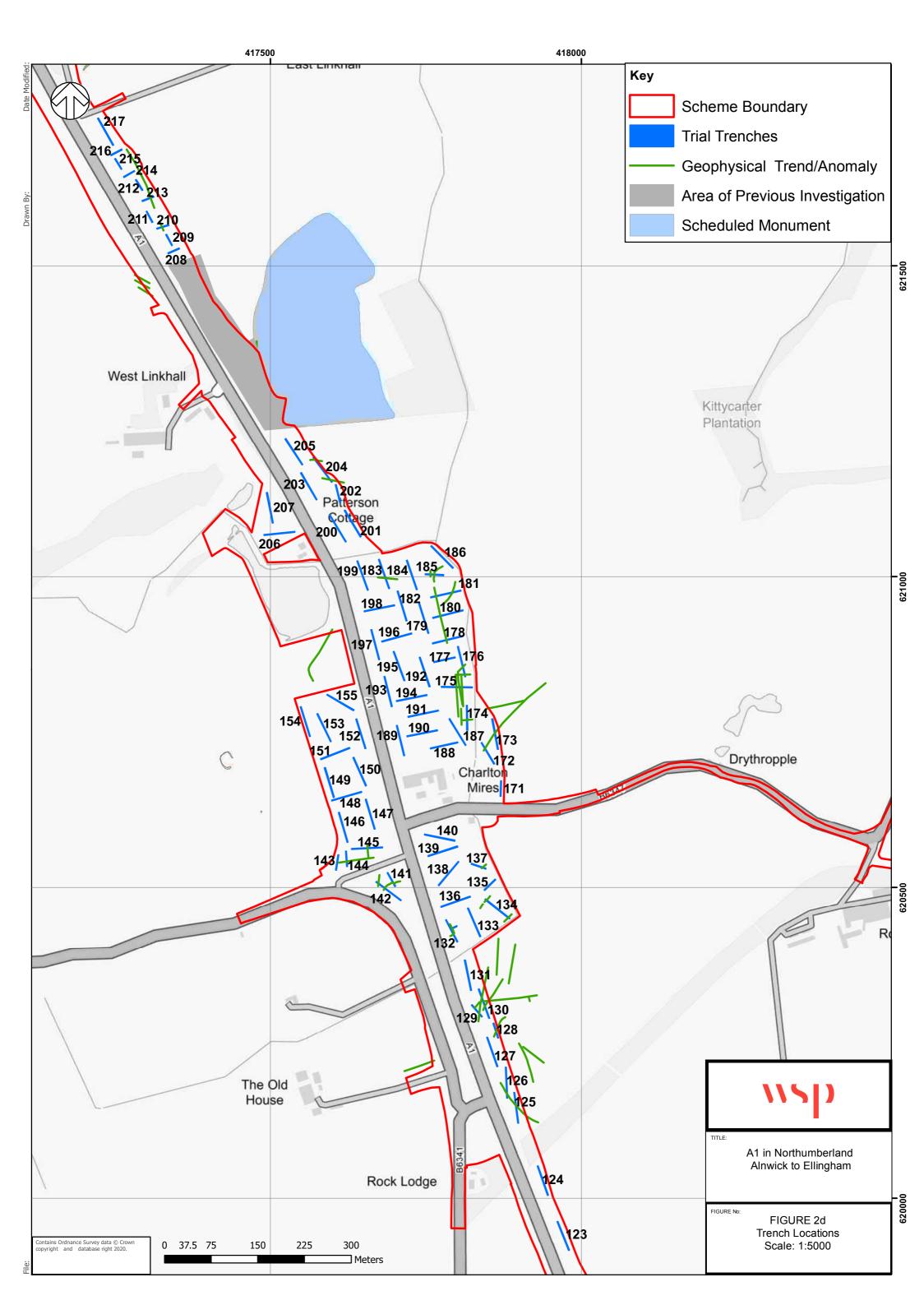
# Appendix B

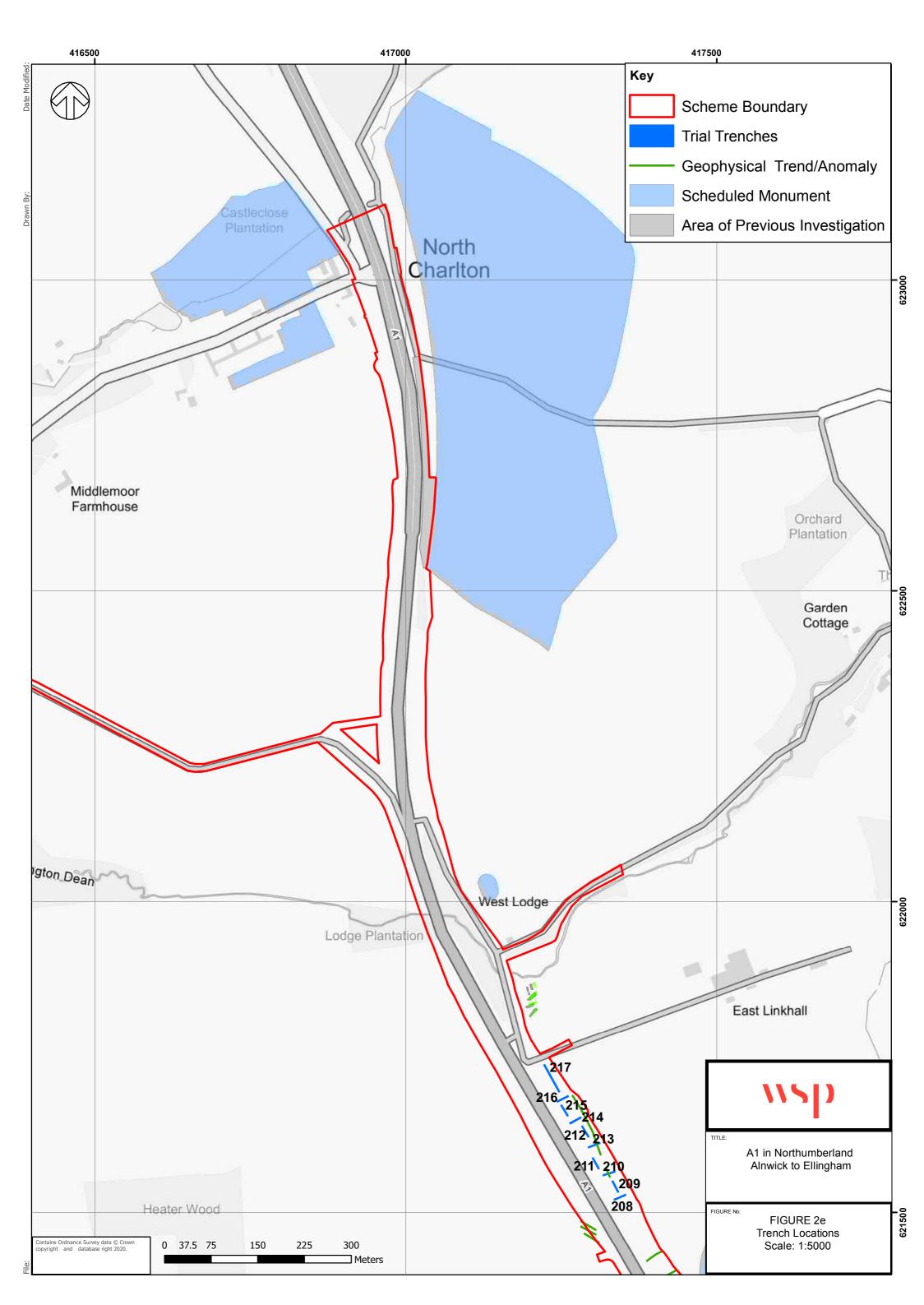
**FIGURES** 











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